THE BOSTON
MEDICAL AND SURGICAL JOURNAL.

VOL. XCVII. — THURSDAY, SEPTEMBER 27, 1877. — NO. 13.

A CASE OF PECULIAR UNILATERAL TREMOR FOLLOWING HEAD INJURY.

BY ALLAN MCLANE HAMILTON, M. D.

E. B., aged thirty-six, born in Ireland, by occupation a blacksmith, is a stout, well-made man of nervous temperament, and up to the commencement of his present trouble had enjoyed uninterrupted good health. He has not had syphilis, and his habits have been good. His mother and father are dead, the former having died of old age and the latter of phthisis. There is no family history of insanity, epilepsy, paralysis, nor of any organic nervous trouble whatever. Ten years ago, while working upon a fire-escape, he fell to the ground, two stories below, striking upon his head and shoulder. He was taken up unconscious, and remained so for fourteen hours. The only injuries he received were two severe scalp wounds, one of which from its slowness in healing must have been attended by some bone injury, for he was unable to resume work until three months later. He says that purulent accumulations took place and that "the doctor lanced them." Two cicatrices are now visible, one of which is about an inch and a half long and is situated on the left side of the head, and covers a depression about three quarters of an inch in diameter and one quarter of an inch in depth, the centre of which is about one and one half inches below the median line, five inches above the left ear, and four and three quarters inches above the centre of the left supra-orbital arch. This is the only depression visible, and the injury on the right side was apparently very superficial.

He gives no history of serious head symptoms, and when he resumed work was in good condition, there being no paralysis. About three months later he noticed a tremulousness of the fingers of the *right* hand, and afterwards of the arm of the same side. There was no pain nor loss of power, but simply a marked tremor whenever he attempted to do anything. This difficulty increased to such an extent that he was obliged to resign his position as first-class workman and become a helper, using his other arm to work the bellows. About six months after this the tremor affected the right leg, and he was obliged to leave his work.

Present Condition. — The patient does not complain of head symptoms, except a slight hyperæsthesia of the right side of the face, of short duration. Vision normal; fundus of either eye presents no abnormal appearances; pupils respond well to light and are of equal size. Hearing unaffected. No tremor of face or tongue, speech unembarrassed, memory good, and no intellectual trouble whatever. He has never had headache.

Upper Extremities. — Left side unaffected. The right hand and arm are perfectly quiet during inaction, but when the most simple voluntary act is attempted they become agitated by a fine rhythmical tremor, which becomes more marked as the accomplishment of the act requires greater nicety of coördination. When he is asked to carry a glass of water to his mouth he spasmodically grasps the vessel and carries it upward, the elbow being raised, the tremor meanwhile increasing until the mouth is reached, when the movements become so violent that he is unable to place the rim of the glass between his lips. Certain motions are almost entirely unattended by tremor. He can extend the arm and hand, or can hold them rigidly upright, and is able to pronate the hand, but movements of *flexion* are attended by increased violence of the tremor. Tactile sensation is somewhat impaired, but susceptibility to painful impressions is not diminished. There is absolutely no loss of muscular power, no atrophy of the hand or arm, the thenar eminences being covered by firm cushions, and the interosseous spaces are well filled.

Lower Extremities. — The left leg, like the arm, is in no way affected. The right leg, however, is agitated by muscular tremor when he attempts to use it, or approximate it with its fellow, as in standing erect. There is no loss of muscular power, but some anæsthesia, the patient being unable at any place to distinguish two points of the æsthesiometer unless they are separated by at least eight centimetres.

When he stands with his eyes closed he is "groggy," but does not fall. He can stand upon the right foot alone, but not upon the left. When he walks the right heel is brought down first, so that the heel of the shoe is much worn. He has some plantar formication and coldness of the foot. He has suffered from pains of a pseudo-neuralgic nature in the right shoulder and right thigh, which were centrifugal, as well as some pains which darted from the heel up the inner side of the leg. The pains in the upper extremity are not so frequent as they were a year ago. There has been no history of body-constricting band, pain in the back, or vesical trouble of any description, but for the past five years he has been constipated and obliged to take purgatives. There are no contractures whatever.

The peculiarities of this case seem to be the unilateral tremor (not disorderly movements) excited by voluntary exertion, its predominance in flexion, while certain movements of extension are almost unattended by any embarrassment, the absence of muscular weakness, contractures, or atrophy, and the evident dependence of the trouble upon a localized cerebral injury of the opposite side, which probably resulted from the fall.

I am unable to arrive at any conclusion which would lead me to consider the symptoms due to cerebro-spinal sclerosis, or one-sided posterior spinal sclerosis, if the latter anomalous condition could exist. The utter absence of loss of power and permanent contraction of the affected limbs, and the non-extension of the affection to those of the other side of the body within ten years are sufficient to invalidate such a diagnosis.

The non-occurrence of convulsions and other symptoms of cerebral tumor renders this as a cause of the tremor quite improbable.

Of course the assumption that this patient's symptoms are due to some irritative meningeal or cortical lesion must be based upon purely theoretical grounds, but the features of the case convince me that such a condition of affairs is by no means improbable. If we take the trouble to consult the charts given by Hitzig and Ferrier we shall find that they have assigned a cortical region which is "situated on the ascending frontal, just behind the upper end of the posterior extremity of the middle frontal convolution," which "is the centre for the movements of the hand and fore-arm in which the biceps is particularly engaged, namely, supination of the hand and flexion of the fore-arm."[1] Again, if we study the admirable article of Turner[2] we shall find very useful hints which will enable us to lay out the exterior of the cranium into regions corresponding with the convolutions beneath. One of these areas, which has been called the "upper antero-parietal space," includes the ascending parietal and ascending frontal convolutions, and an injury at the point I have located in describing this case would be just about over the centre, which, when experimentally irritated, produces movements of flexion and supination.

It is quite reasonable to suppose that this irritation occurring with volitional movements is due to a natural increase in the blood pressure during mental activity, a consequent increase in cerebral volume, and a resulting contact with the depressed portion of bone, which probably does not impinge upon the cranial contents at ordinary times.

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[1] Functions of the Brain, page 307.

[2] Journal of Anatomy and Physiology, vols. xiii., xiv, November, 1873, May, 1874.

NERVOUS SYMPTOMS SECONDARY TO SLIGHT GASTRIC DISTURBANCE.

BY S. G. WEBBER, M. D.

It is by no means always easy to unravel the complicated relations of cause and effect even in apparently very trivial cases. The viscera, above all the abdominal viscera, are not abundantly supplied with sensitive nerves, and disturbance of function, unaccompanied by organic lesion, may give rise to so slight local symptoms that the patient entirely overlooks them; especially is this true if other secondary symptoms, producing great discomfort, mask the primary affection. It is chiefly or only in the comparatively trifling affections of the viscera that this is true; serious lesions are revealed by such marked symptoms that they are not likely to be overlooked.

The manner in which the secondary symptoms are produced must be varied. The quality of the blood may be changed and hence the nutrition of distant organs may suffer; there is loss of vigor, or actual structural change. This is the case in kidney disease; cerebral symptoms may be the first to attract attention; the blood is poisoned by retained excrementitious substances. The same may be true in disturbances of the digestive organs from the retention or reabsorption of excretions.

But there is less liability to error of diagnosis in these cases than there is in another class, wherein there seems to be no blood poisoning and where there is little or no derangement of nutrition. It appears reasonable to believe that often the nervous system furnishes the path by which the abnormal influence is conveyed to distant organs; whether discomfort is caused by the action of the vaso-motor nerves upon the blood-vessels, or by an irritation of the nerve centres themselves and thereby through reflex influence, it may be impossible to decide in every case.

Let the afferent nerve, whether sympathetic, pneumogastric, or spinal, convey an irritation to the central organ, and that irritation, if of sufficient strength, may in turn arouse the nerve centre of a different region, and the secondary irritation, experienced in a nervous centre which is more irritable or less stable than that originally excited, is manifested by spasmodic action or by a sense of discomfort which may amount to severe pain. Yet the primary irritation is not sufficiently strong to awake consciousness. There is nothing new in this, and my object is merely to call attention to two or three characteristic cases, patients who came to me or were sent solely on account of nervous disturbances without any attempt having been made to regulate the digestion. It is not strange if we sometimes overlook disorders which produce no symptoms, or where their symptoms are so thrown into the shade that the patient takes no thought of them. In none of the cases to which I shall refer did the patients themselves give more than a secondary importance to the derangements of the digestive organs.

Headaches and other cerebral symptoms are common after irregularities in diet, but Anstie says that it is "exceedingly rare for irritation conveyed from the alimentary canal to take any important part in setting up neuralgia of a distant nerve." He refers to Valleix as making the same statement in case of neuralgias of the head. Other authors include gastric and intestinal irritation among the causes of neuralgia.

In the case of a patient affected with neuralgia, the pain shifting from one region to another, now in the legs, now in the back, arms, face, or head, with each attack forsaking the former locality and appearing elsewhere, I was led finally to refer the pain to gastric disturbance as a cause. Tonics and various anti-neuralgic remedies proved only temporarily of benefit; at length it was noticed that there was during each attack a sense of abdominal fullness. There was little or no distress after eating and only occasionally undue acidity of the stomach. Various remedies were then used with a view to correcting the disease of the digestive organs. Those directed to the stomach, such as quinine, pepsin, mineral acids, and charcoal, gave a temporary relief only, and it was necessary to change from one to the other, but during this time it was difficult to persuade the patient to carry out the directions given about exercise and diet. Finally small doses of calomel and strychnia gave more favorable results, in part, perhaps, because more care was used by the patient in regard to both exercise and diet. After this there was a very great improvement, the neuralgic attacks were much less frequent and intense, and none of any severity have been experienced for several months.

In this case the coincidence of neuralgia with flatulence and the fact that both yielded when attention was directed to the digestive organs would show that the neuralgia was secondary to the dyspepsia. Yet it is certainly true that there was a condition ready to develop neuralgia in the patient's state of health.

And so in other cases of nervous disturbance secondary to disease of the viscera there is probably a state favorable to the appearance of the secondary symptoms. In the following case excessive smoking combined with hard work and mental worry to develop the required condition. That hard work and mental worry were only predisposing causes may be inferred from the fact that they continued to act after tobacco was given up and the stomach was cared for, but the nervous symptoms did not return.

The patient was a lawyer who was troubled with distressing sensations, pressure at the occiput, slight pain in the forehead, sometimes dizziness, tingling in various parts, mental lassitude, a tired feeling, and "the blues." There was also a sense of oppression at the epigastrium, with acid eructations and belching of wind. At times the heart beat violently, and there was a slight pain in the cardiac region; there was no pain in shoulder or in arm. He smoked one cigar in the morning, one at noon, and several in the evening; he also drank strong tea and coffee. Under treatment directed to the digestive organs and by diminishing the number of cigars to one a day, which he cut into three pieces to smoke at the usual hours, he greatly improved. Several months later there was a little discomfort on lying down, especially if the stomach was full. This finally disappeared.

In another case the gastric disturbance was not so well marked, yet I have no doubt it was one chief cause of the cerebral symptoms. A lawyer overworked himself, neglected exercise, was irregular at his meals, ate rapidly, and went to work immediately after. He suffered from headache, dizziness, and various unpleasant sensations, weakness and loss of mental power. None of the symptoms were very severe, but combined they nearly deprived the patient of the power of working. He thought his digestion was good, and was not aware of any dyspeptic symptoms, but at times there was a slight nausea, and the urine immediately after passing was cloudy from a granular deposit. Subsequently, perhaps because his attention had been called to the stomach, he noticed more decided dyspeptic symptoms. It was by no means easy to separate the effects of overwork from those of indigestion, but I was strongly inclined to believe that taking hurried and irregular meals at eating-houses, with food probably not too well cooked, was really the cause that the hard work proved injurious. This patient was rather unmanageable: he found it difficult to take twenty minutes for dinner; exercise was a burden to him; he could not endure taking medicine regularly. Nevertheless, with a short vacation, quinia, extract of nux vomica, and hydrochloric acid the urine cleared up, the headache ceased, and his condition greatly improved, but during the last three years he has repeatedly disregarded cautions and has had a return of the old symptoms.

A patient now under treatment illustrates more strikingly than those just referred to the connection between cerebral symptoms and irregularities in the digestive organs. But there was also overwork and anxiety, with disregard of all hygienic rules so far as concerns eating. The dyspeptic symptoms first appeared and were not heeded until cerebral symptoms were developed.

But because there are cerebral and gastric symptoms coexisting one must not jump at the conclusion that the latter are the cause of the former. Just the opposite may be the case. Most cases of sick headache are purely nervous in origin. Many patients refer them to derangement of the stomach, probably because there is vomiting and because imprudence in diet is an exciting cause of an attack; but other disturbing influences, as severe mental application, loss of sleep, etc., may cause an attack independently of all imprudence in diet. Thus a patient who had been troubled with attacks of vertigo, sometimes with vomiting, often with nausea, found that attacks were caused by eating fried food, sitting up late, attending concerts, a strong wind from a certain point of the compass, noises, a bright sun, and by looking at certain motions as that of the waves. There was a similarity to epilepsy in the attacks, but a stronger resemblance to migraine. There was apparently no indigestion; between the attacks the health was excellent; there was no heart-burn, no acidity of stomach, no flatulence. Remedies directed to improving the digestive powers did little or no good; strychnia seemed to aggravate the condition; bromide of potassium alone, or combined with the iodide, and blistering the back of the neck were beneficial.

The difference between such cases as the last and the others is great. In the former the dyspeptic symptoms may be insignificant, but they either exist before the nervous symptoms or are present continuously; no other adequate cause can be discovered to account for the disturbance of the health; remedies directed to correct the digestive irregularities are beneficial while other remedies fail. In those cases where the nervous system is at fault primarily, the digestive symptoms are not noticed before the nervous, and where the attacks are periodical they are not present in the intervals; other influences than imprudence in diet will cause an attack; the symptoms are more frequently nausea and vomiting, which by its severity obtrudes itself into notice; remedies directed to the nervous system give the best results. Unfortunately, overwork, anxiety, or care as predisposing causes may give rise to either purely nervous disturbance or to nervous weakness and gastric derangement, leading then to such attacks as have been described, and this renders a diagnosis difficult.

RECENT PROGRESS IN THERAPEUTICS.[1]

BY ROBERT AMORY, M. D.

Effects of Saline Cathartics, Nitro-Muriatic Acid, and Mercury upon the Bile.[2] — In continuing these experiments (*vide* previous reports) Professor Rutherford has taken up the consideration of those substances which are more commonly found in natural spring waters having cathartic properties. His results may be summarized: —

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[1] Concluded from page 343.

[2] Experiments on the Biliary Secretion of Dogs. Rutherford and Vignal. Journal of Anatomy and Physiology, July, 1877.

Sodium sulphate, sodium phosphate, probably by stimulating the hepatic cells, Rochelle salt (tartrate of potash and soda), have decidedly exciting influence in stimulating the flow of bile and increasing the amount of biliary matters; whilst magnesium sulphate, potassium sulphate, sodium chloride, sodium bicarbonate, potassium bicarbonate, and ammonium chloride have little if any cholagogue action; and, moreover, magnesium sulphate diminishes the flow of bile. With regard to the cathartic action these experiments show that sodium sulphate, magnesium sulphate, probably by excitation of the intestinal glands, potassium sulphate, and sodium chloride have a decided purgative effect upon dogs, and the irritant action on the intestinal mucous surface, especially in the upper half of the small bowel, is most marked after the administration of magnesium sulphate. All of the above-named saline cathartics produced more or less irritation of mucous membrane of the small intestine, and yet the amount of purgation was not always in proportion to the post-mortem vascularity of the mucous membrane, as, in the case of decided and watery purgation from sodium phosphate, the vascularity was only slightly increased above the normal appearance.

Now Carlsbad water holds in solution a large amount of sodium sulphate, which in these experiments showed the most decided cholagogue action of any of the above-named salts, and this fact is of importance to the clinician, who in practice has been led to rely upon these waters for biliary excitation. Magnesium sulphate and sodium sulphate are found in Hunyadi János bitter water in nearly equal parts, namely, about two hundred and twenty-five parts in ten thousand parts of the water. Pullna contains nearly as much sodium sulphate as the Hunyadi János, but only three quarters as much magnesium sulphate. In Seidlitz water there is five sevenths as much magnesium sulphate as the Hunyadi János, but no sodium sulphate. Friedrichschaller contains less than one quarter as much magnesium sulphate and more than one third as much sodium sulphate. From this we can deduce the following results, provided the action on man is similar to that on dogs: When catharsis without biliary excitation is indicated we may use Seidlitz water; when both are desired we may use Hunyadi János water; when only biliary excitation is required, with very slight cathartic action, we may use Carlsbad water; both Pullna and Friedrichschaller have more influence in exciting biliary secretion than simple catharsis.

Dilute Nitro-Hydrochloric Acid (*Br. Ph.*). — The dose of this for a man is from five to twenty drops. Dr. Scott, of Bombay, supported by Annesley, Martin, and others, claims that this substance will stimulate the liver and reduce its congestion; it was also used as a foot-bath and topically applied over the hypochondriac region. Professor Rutherford injected into the duodenum, as in his former experiments with other medicaments, rather large doses of the dilute acid (forty minims in eight cc. of water), and, within two and a half hours after, the gradual increase of the biliary flow attained its maximum. Post-mortem examination showed a slight congestion (extending about ten inches) of the upper portion of the small intestine and some slight corrosive action in the duodenum, but no evidence of purgative action. It would have been more interesting and instructive if the experimenters had tested the cholagogue action of this acid by eliminating the irritating influences on the orifice of the gall-duct, that is, by introducing this acid, directly or indirectly, without contact with the intestinal mucous surface into the circulation of the liver.

Action of Mercury. — "In three of the four experiments mentioned" (in the first series of experiments previously reported in the JOURNAL) "calomel caused no increase of the biliary secretion. In the fourth experiment, however, a trivial increase was the result. So many observers having stated that calomel is a cholagogue in the human subject, the result of our experiments seemed to us very remarkable, inasmuch *as every other substance, save ammonium chloride, believed to be a cholagogue in man, is also a cholagogue in the dog.*" Therefore Professor Rutherford and M. Vignal subjected their previous researches to further proof. In all the former experiments the calomel was simply suspended in water and injected into the duodenum; in the present experiments the calomel was mixed with bile (which is supposed to be a solvent) and then injected into the duodenum. As before, the intestinal glands were stimulated and purgation followed; yet the amount of bile diminished rather than increased after the injection. Objection having been brought against this method of investigation from the fact that the calomel was not administered through the stomach, and that when this is done mercury combines with hydrochloric acid and chlorides, forming mercuric chloride, these observers digested during thirty-six hours three grammes of calomel in five hundred cc. of distilled water acidulated with hydrochloric acid (0.02 per cent.) at a temperature of 100° (F.). The filtered liquid gave the reaction for mercuric chloride, though the calomel had previously been found free from that salt. This salt, dissolved in water, was then injected into the duodenum (two fifths of a grain divided into six doses at one hour's interval), and there was no increase in the amount of bile secreted, though purgation was induced. Then mercuric chloride dissolved in bile was injected, and was followed by a very decided increase in the biliary flow, accompanied with slight purgation. One twentieth of a grain of bile with one grain of calomel in 0.5 cc. of bile and two cc. of water induced the flow of bile to the amount of 0.85 cc. an hour per kilogramme of body weight. Thus these experimenters conclude that mercuric chloride is a powerful hepatic stimulant; "that calomel in doses of ten grains, five grains, or two grains, several times repeated, when placed, *without bile*, in the duodenum of a fasting dog, produces a purgative effect, varying with the dose; but so far from increasing the flow of bile only diminishes it;" "that when calomel is *mixed with bile* and introduced into the duodenum there is no difference in the result;" "that if five grains of calomel be subjected at 100° (F.) for seventeen hours to the action of dilute hydrochloric acid of the same strength as that of the human gastric juice, not more than one thirty-fifth of a grain of mercuric chloride is produced."

Professor Rutherford quotes from the report of Hughes Bennett's committee [1] four experiments to show "that the action of calomel when placed in the stomach of a dog was just the same as when introduced directly into the duodenum," and observes that "every opportunity was afforded for a transformation of the calomel into mercuric chloride," because "the calomel was introduced into the stomach, and the animal had its usual diet." In regard to a reconciliation of the great question apparently between the results on man and animals he says, "We maintain that up to this time there is really no discord between our results and those arrived at by observations on man. All our experiments concern the *secretion* and *not* the *expulsion* of bile. For the purpose of arriving at *definite* knowledge, we intentionally — in the manner described at the outset of these experiments — threw out of action the *bile-expelling* mechanism, in order that we might have to deal with the *bile-secreting* apparatus."

The expulsion of bile "may be occasioned (1) by stimulation of the hepatic secreting apparatus, (2) by stimulation of the muscular fibres of the gall-bladder and larger bile-ducts, to wit, the bile-expelling apparatus, (3) by removing a catarrhal or congested state of the orifice of the common bile-duct, or of the general extent of the larger bile-ducts, (4) by removing from the intestine substances which had been passing therefrom into the portal vein and depressing the action of the hepatic cells, or (5) by stimulating the intestinal glands and thereby producing severe drainage of the portal system, whereby the 'loaded' liver may be relieved. . . . . Seeing that calomel stimulates the intestinal glands in the dog as in man; seeing that mercury produces salivation, ulceration of gums, and other characteristic phenomena in the dog as in man, the obvious inference is that the reputed cholagogue action of calomel in the human subject is probably not owing to stimulation of the bile-secreting apparatus. And why should we, in the face of our experiments, believe the opposite until the clinical observers substitute — *for vague conjecture* — definite proof of that opposite by experimenting in a case of biliary fistula in the human subject, when it happens that no bile enters the intestine?"

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[1] British Association Reports, 1868, page 214.

Erythroxylon Coca.[1] — Dr. McBean, premising that this drug in health prevents the feeling of fatigue and limits the secretion of urea, has used it in typhoid and typhus fevers. After its use he observed that the amount of urea was in these diseases diminished to one third or one half of that excreted before the drug was taken, and the symptoms of fatigue were very much ameliorated.

Croton-Chloral Hydrate.[2] — Several practitioners testify to the relief in whooping-cough from the administration of this drug in doses varying from half a grain to two grains.

Aconite, its Mode of Action. — Rosenthal[3] confirms the researches of Lewin and Achscarumoff. A small quantity of aconitia is rapidly absorbed and causes paralysis of the centrifugal ends of the pneumogastric nerve; this paralysis is preceded by a momentary interval of excitement. The consequent paralysis of the phrenic nerve produces that kind of respiratory movement which is called costal. A cardiac paralysis then causes dyspnœa and convulsions. The more or less rapid paralysis of the heart (varying with the kind of animal used) will explain the different results obtained by experimenters.

The following new pharmaceutical preparations are presented as the most promising for clinical use:[4] —

Granular Effervescent Salicylate of Soda and Salicylic Acid[5] are agreeable forms in which to prescribe these drugs.

Clin's Monobromide of Camphor in Capsules.[6] The monobromide is quite pure, and the capsule is made of gluten, which is readily soluble in the stomach.

Opiatine[7] contains only salts of morphia and codeia in unvarying amounts, the other portions of the opium having been separated. This preparation is a powerful anodyne, sedative, and soporific; the dose should be ten to thirty minims.

Ivory Jelly[8] contains phosphates prepared from ivory dust. This is very delicate in flavor and well adapted for invalids.

Saturated Solution of Sulphurous Acid Gas in Alcohol contains one hundred times its volume of gas. On exposure to air the gas is evolved in large quantities.

Chocolatine[9] contains but little fat and no starch, and yields a pleasant cup of chocolate.

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[1] British Medical Journal, March 10, 1877.

[2] A. M. Roberts, Lancet, June 23d; Fidder, Id., February 24th; William Paulson, Id., February 10, 1877.

[3] Sitz. der. phys. med. Soc. zu Erlangen, t. viii. p. 181.

[4] Lancet, February 24, 1877.

[5] Manufactured by Savory and Moore, London.

[6] Manufactured by Roberts & Co., London.

[7] Manufactured by Gale & Co., London.

[8] Manufactured by Callard, London.

[9] Manufactured by Montanban & Co., London.

Trömmer's Extract of Malt is used as a very efficient adjuvant to many of the salts of iron in solution. This extract is manufactured in Ohio.

The following preparations are made by Metcalf & Co., of Boston: —

Elixir of Viburnum Prunifolium (Black Haw). Each fluid drachm represents eight grains of the bark of viburnum prunifolium.

Elixir of Yirba Santa has eight grains of the drug in each fluid drachm.

Compound Elixir of Matico. Each fluid ounce contains sixty grains of matico, thirty grains of buchu, and thirty grains of cubebs.

Elixir of Chestnut Leaves. Each fluid drachm contains eight grains.

Elixir of Rhamnus Frangula (Buckthorn). Each fluid drachm represents eleven grains of the bark.

Elixir Coca (Erythroxylon) has four grains of the coca leaves in each fluid drachm.

Elixir of Guarana contains eleven grains of guarana in each fluid drachm.

Elixir of Wild Cherry contains eight grains of wild-cherry bark in each fluid drachm.

Compound Elixir of Cimicifuga. In each ounce are twelve grains of cimicifuga, eight grains of wild-cherry bark, two grains of ipecacuanha, six grains of licorice, and four grains of seneka. The elixir used in the above preparations is the simple elixir formula of the American Pharmaceutical Association.

Ethereal Extract of Mezereon. This is the ethereal extract of the alcoholic extract, the powdered mezereon being exhausted with alcohol, the alcohol evaporated, and the resulting alcoholic extract exhausted with ether, which is finally evaporated, leaving the ethereal extract. This is officinal in the British Pharmacopœia, being used in the preparation of *linamentum sinapis compositum* of that work.

Ferrum Oxydatum Dialysatum was introduced to the medical profession under the name of *fer bravais.* According to Professor Maisch[1] this is nothing more nor less than a very basic oxychloride of iron. After a review of the literature of dialyzed iron from 1858 to the present time, he concludes "that any permanent solution of so-called soluble oxide of iron must contain notable quantities of acid; and within the past year such has been proven by Hager to be the case for several European preparations sold as oxide of iron." These solutions are very convenient for combination with many of the fluid extracts or with quinine. The addition of saline solutions, or of an acid not in excess, causes a precipitate which redissolves on dilution with distilled water. The solution, as prepared by Melvin & Badger, of Boston, requires three weeks for dialysis, has no acid reaction, has a specific gravity of 1015, and contains one grain of the dry colloid iron to the fluid drachm. The addition of a solution of tannin causes the precipitation of the fine tannate of iron in very small quantity. The transparency of the liquid is not disturbed by a little of the solution of nitrate of silver.

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[1] American Journal of Pharmacy, July, 1877.

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PROCEEDINGS OF THE NORFOLK DISTRICT MEDICAL SOCIETY.

HENRY R. STEDMAN, M. D., SECRETARY.

THE regular quarterly meeting of the society was held in Roxbury on July 10, 1877, at eleven A. M. **DR. J. P. MAYNARD**, president, in the chair. Present thirty-five members.

DR. EDWARD J. MEAD read a paper on Criminal Accountability of the Insane, which has been reserved for publication.

DR. C. ELLERY STEDMAN reported three cases of puerperal convulsions occurring in his practice during the last month. The first case was interesting from the fact of the convulsions coming on before, during, and after labor, the moribund condition of the patient, and her final recovery.

In the second case the convulsions began thirty-six hours after labor, and finally yielded to treatment. In the third case, only a single convulsion occurred; rapid recovery.

The treatment employed was emptying the womb, — in one case exciting labor by introducing an elastic catheter between membranes and the uterus, — venesection, cathartics, anæsthesia by ether, as well as the administration of morphine subcutaneously, one third grain at suitable intervals, etc.

In his remarks upon the cases, Dr. Stedman spoke highly of the use of the morphine injection, and suggested that a third of a grain should generally be given, and that even half a grain had often been used with success.

DR. HENRY A. MARTIN said that in his first case of puerperal convulsions, which was twenty-eight years ago, there were thirty-three convulsions. Patient was bled and croton oil and ether were administered, — opium not being given as there was some prejudice against it. This patient got well.

Eleven subsequent cases all recovered, owing to their being religiously left alone, with exception of applying cold to the head, enemata, and emptying the uterus.

Another case was in a primipara at the sixth month of pregnancy. She was much troubled with headache, but got up and walked two miles, when she fell down in a convulsion. After a second convulsion Dr. Martin attempted to induce labor; os very rigid and undilatable. He finally managed to get down a foot, but the os remained rigid in spite of a full dose of belladonna. He then nicked the os and the child was delivered. The convulsions, however, continued in spite of the chloroform; deep coma set in. Anxious to change the condition of the patient's brain he gave a grain of morphine, which he followed soon after with one fourth grain more. In two hours the narcosis became profound, after which the patient recovered.

He thought that morphine should *not* be given in these cases before the uterus is emptied.

Dr. Stephen C. Martin read the following case of Compound Separation of the Lower Epiphysis of the Tibia, with Fracture of the Fibula. He remarked that, in a discussion which took place in the Société de Chirurgie of Paris on the subject of the Separation of the Epiphyses, reported in the Biennial Retrospect of the New Sydenham Society for 1865-1866, the opinion was very generally expressed that such a thing did not occur; but that in every instance a portion of the shaft was attached to the epiphysis, so that the case was really a fracture. M. Broca, however, reminded the society that the injury could easily be produced in the dead subject, and therefore was very probably more frequent in the living than was supposed. Separation of the lower epiphysis of the tibia is certainly a very rare accident. Prof. R. W. Smith, of Dublin in his address on Surgery, printed in the *British Medical Journal*, August 17, 1867, says that, so far as he knows, there is no published authentic example of it except one which he put on record in 1860. This was a case which was not seen by him until six months after the accident. Professor Smith had, however, overlooked a description by Holmes of a specimen in St. George's Hospital Museum. This was the case of a young man of eighteen, whose leg was caught in a rope on board ship, and had to be amputated for rupture of the popliteal artery. The specimen presents separation of the lower epiphyses of both the femur and tibia, a small portion of shaft being attached in both instances; also separation of both epiphyses of the fibula. This last is somewhat doubtful from the fact that the bones had been macerated. The specimen is figured in Holmes's work on Surgical Treatment of Children's Diseases. This extreme rarity of the lesion induced him (Dr. Martin) to present the following case: —

The patient, a healthy German lad, aged eleven, in sliding down from the top of a telegraph pole, on the afternoon of November 19, 1876, lost his hold when about half-way down, and fell violently to the ground. He was taken up by some passers-by and conveyed home in a carriage. On my visiting him an hour after the accident, I found that the distal end of the shaft of the tibia had been separated from the epiphysis and was protruding through the integument. It had been thrust into the hard, frozen earth, friction with which had stripped the periosteal covering of the bone from its entire external surface for the space of at least one and three fourths inches. The peculiar stellate radiations of the extremity of the shaft, where it joins the epiphysis, were found to be perfect, when the dirt which had been packed into them had been removed. The entire surface of the end of the shaft was plainly in sight, so that a most thorough examination could be made. It was found that no portion whatever of the shaft was broken off, but that the case was one of separation of the epiphysis purely.

There was also a fracture of the fibula about four inches from its lower extremity.

It was found necessary to enlarge the wound considerably, and afterwards to use a good deal of force to accomplish reduction. To the outside of the leg a piece of prepared felt, softened in hot water, and of sufficient length to extend from the knee to the sole of the foot, was applied. This almost immediately formed a firm and perfectly adapted case for that side of the limb, and was merely tied on by three or four strips of bandage. The leg was laid, in Pott's manner, on its outside upon a pillow, the knee being bent at a proper angle. There was no hæmorrhage beyond a very slight oozing from the bone, which was at once controlled by placing the foot in a slightly elevated position. The wound was closed with a compress of wet lint and a few turns of bandage.

The next morning, on visiting the patient, I found that there had been much hæmorrhage. On removing the dressings the wound was found to be distended with soft coagula. When these were cleared away it was seen that from the entire denuded surface of bone venous blood was oozing very freely. The foot was elevated, ice and afterwards a graduated compress applied, but with little or no effect. The bleeding was so profuse and had been so great that its much longer continuance threatened even the life of the patient. Under these circumstances I was advised by my father, Dr. H. A. Martin, to dust the surface of the bone with powdered subsulphate of iron and to fill the wound with lint, outside of which a compress soaked in cold water was applied. On visiting him that evening I found that there had been hardly any bleeding since these measures had been taken. The next morning the lint was removed and the wound washed out. The wound looked well, and a crust formed by the union of the subsulphate of iron and blood covered and protected the bone. There had been delirium during the night, which lasted some little time longer, about twenty-four hours in all, and disappeared upon action of the bowels. For the next three days a little salicylic acid was sprinkled upon the wound at each dressing. From the end of that time (November 25th) to December 2d, a bag of dry earth, with a dressing of salicylic acid, was laid upon the wound, a fresh one being prepared at each visit. After that an ointment containing carbolic acid and simple cerate was used till the wound was healed. Up to November 26th the uncovered surface of the bone looked perfectly dead, and I supposed would eventually entirely exfoliate, but at that date it began to assume a rosy hue, which gradually deepened until December 9th, when granulations were thrown out by the bone over its entire surface. On the 8th of December the splint was removed, and thereafter the leg was simply laid upon a pillow, with tarred oakum underneath it to catch the discharge, and the wound dressed with the carbolic-acid ointment and oakum. From that time the wound quickly filled up with granulations and cicatrized. Three very small pieces of bone worked up through the granulations to the surface. In two months from the time of the injury the boy was about as usual.

Dr. Henry A. Martin said that he wished to add a few words to the narrative of the very rare case just read, in regard to the use of powdered subsulphate of iron as a hæmostatic applied to denuded bone. As he had reason to know that such use of this salt is disapproved by very eminent Boston authority, even in hæmorrhage from wounds which do not involve the bones, and, where bleeding is from denuded bone, is by the same authority considered extremely improper and unsafe, he wished to take the entire responsibility of having advised its use in this instance. In this case he would very gladly have avoided the use of any hæmostatic drug, but the hæmorrhage was so profuse and so entirely beyond control by other means that he had no choice. If, however, he had any faith in the doctrine of danger from its use he should not have advised the subsulphate. The notion on which the unfavorable opinion of the subsulphate of iron is founded seems to be that it is a caustic, destructive of living tissues, and particularly of bone. He had never seen anything in its quite frequent use which would lead him to agree in this opinion. On the contrary, it had seemed to him eminently conservative of wounded tissues, and it is so because, combining with blood and dead tissue, it forms a peculiarly firm adherent crust or scab, under which nature's processes of repair go on most perfectly. He had never observed anything like injury to living tissue from the action of the subsulphate, but, on the other hand, the most decisive evidence that no such injury ever occurs.

It would not be easy to find a case better calculated to make manifest the injurious effects alluded to than that which you have just heard narrated, — a large surface of bone entirely bare of periosteum, and a separation of the epiphysis into which the dissolved salt could easily find entrance. There certainly was no injury to the bone from a very free application of this supposed destructive agent, for on the seventh day, from being white as ivory and apparently dead, it became of a rosy pink, and was very soon covered with a full coat of healthy florid granulations. Instead of a large exfoliation of bone, which might have been looked for, all that appeared were two or three insignificant little particles. One would almost think that a directly favorable effect on the vitality of the bone had followed the application. There certainly was no injurious effect whatever. It may be said that the boy escaped, not on account of the treatment, but in spite of it. Such is a common style of criticism, but it will not answer here. If the action of the subsulphate of iron upon denuded bone is destructive it is as a chemical agent, and if in one case then in all. He did not believe it to be bad practice to apply the subsulphate of iron to wounds, venous bleeding from which cannot be arrested by simpler means, even if such wounds expose whole or fractured bone; for pure subsulphate of iron is not, in any way, a caustic destructive of living tissue, but an admirable antiseptic hæmostatic, preventing, as such, an entire loss of vitality in wounded and bruised tissues by their being entirely drained of the blood on which their nourishment depends, and also by its formation by union with blood, etc., of a firm and peculiarly antiseptic covering, under which injured tissue regains its full vitality, and lost tissue is repaired.

Dr. Arnold said that he never knew the perchloride to be destructive to tissue; he often used it internally in preference to the chloride. But in many surgical cases it is inefficient; when the hæmorrhage is from a small vessel it is very efficacious, as a clot formed and the extremity of the vessel contracted around it, while in large vessels the bleeding is apt to occur around the clot.

Dr. Martin replied that it was *not* proper with large vessels, but that oozing from a large surface often resisted any means but this, as in secondary hæmorrhage after amputation or that from the lining membrane of the rectum. After operations on the rectum he was in the habit of rolling up the subsulphate with lint and lard, thus making a plug, to which a string was fastened, which, when removed the next day, showed no indication of the occurrence of bleeding. This he had observed in nearly two hundred cases.

Dr. Arnold spoke of the advantage of the use of the perchloride of iron in doses of from four to six drops, and the better results following its use than from the use of the tincture of the chloride of iron.

Dr. Amory asked if any one present had any cases of malignant pustule, as he had one in his practice. He gave a short account of the case, and will report it in full at the next meeting of the society.

After voting that there should be a special meeting of the society held next October, the meeting adjourned.

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CHEMIA COARTATA.[1]

This little work of one hundred and eleven pages treats in a tabular form of all of the elements and their principal compounds. A few pages are devoted to short but accurate definitions of all of the terms used in chemistry. The new nomenclature alone is used.

The tables are so arranged that they give the name and symbol or formula of the substance, its synonyms, history, source, the chemical reactions which take place during its preparation, its properties, and its principal tests. These points are all given in the very briefest manner without any explanation or detailed description, the tests most frequently being represented simply by an equation showing the reaction which takes place on performing the test. The book is, therefore, of no value to the beginner, who is not already familiar with the principles of chemistry and with chemical manipulation, but it is chiefly valuable as a handy book of reference for a few points which may have escaped from the memory, in connection with the more common chemical substances, and, as the author states in his preface, for "students intending to present themselves for examination" in general chemistry. W.

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ADVICE TO STUDENTS.

With the present week the summer vacation passes away and the season of study begins at most of our medical schools. Many, indeed, are forced by the exigences of their situation to swerve from the general plan and hold their sessions at such a period of the year as will enable them most easily to obtain instructors of note. Such vagaries are, however, fortunately not numerous, and only possible under the system which gives the equivalent of a year's work in a few months. We think it would be far more for the advantage of the student if humbler teachers were selected and more attention paid to the improvement of methods of teaching. Except under the new system, habits of careful study are rarely inculcated, a fault which all who compare their own education with that of a recent graduate of one of our more progressive schools sorely regret. There is a kind of information which can be acquired nowhere but in the laboratory, recitation-room, or dissecting-room, and in the early part of student life, which forms the basis of a modern, medical education, and which places those who have submitted to its drudgery in advance of students who frequent some celebrated clinic or follow in the footsteps of a popular teacher. We should earnestly advise beginners to inquire not where the great men and hospitals are to be found, but where that preparatory drill is to be obtained which fits a man to study and observe for himself. This can never be acquired later in one's career. We should also advise a student to adhere as closely as circumstances would permit to one school throughout his course. The fashion of rushing from one school to another to skim the cream from each curriculum leaves vast chasms unfilled by work, which if not as showy is essential to completeness. Having systematically gone through a prescribed course of study, the student may with advantage employ a fourth year in the more pleasing task of suiting his fancy among the clinics of some of our great centres of education. Of these we have at least one whose clinical advantages rank favorably with those enjoyed by the schools of Paris or Germany. Indeed, with our modern facilities for teaching, a foreign tour, however agreeable to the student, has not the excuse of necessity which it had only a few years ago, and we hope our young men will appreciate this fact and be content to avail themselves fully of the opportunities afforded them at home, rather than to substitute for them the prestige of a tour through European hospitals. It might be objected that such a plan as we have thus briefly sketched involves greater expense than most of our students are able to incur, to which we would reply that he who undertakes so responsible a calling should be provided with the means to secure a thorough education, or seek one more adapted to his situation in life.

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[1] *Chemia Coartata, or the Key to Modern Chemistry.* By A. H. Kollmyer, A. M., M. D., Professor of Materia Medica and Therapeutics at the University of Bishop's College; Professor of Materia Medica and Pharmacy at the Montreal College of Pharmacy; and late Professor of Chemistry, etc. Philadelphia: Lindsay and Blakiston.

MEDICAL NOTES.

— An interesting incident in the proceedings of the recent annual meeting of the British Medical Association was the presentation of medals to several medical men for their heroism and perseverance in assisting in the rescue of miners in the colliery accident at Pont-y-pridd, where four men and a boy were imprisoned without light or food from April 11 to 21, 1877. In the presentation address it was stated that the physicians were "for days and days in the mine waiting for the expected release of the men, and when the happy release was made they were unremitting in their attention to the poor men;' also that "the moral influence of the presence of the medical men, who cheered and encouraged the miners to persevere in their attempt at rescue, had a very material bearing upon their success. When the imprisoned men could be communicated with the first thing they asked was, 'Are the doctors there?' and the two young [medical] men, Messrs. Dukes and David, were the first who after a communication had been effected crept through the narrow channel at the peril of their lives. The doctors when in the pit were in the same peril from coal-damp and a flood of water as the working miners, and they had not the stimulus of bodily work to take off their minds from the depressing influence of surrounding circumstances." The gold medal of the association was awarded to Henry N. Davies, surgeon to the colliery, upon whom devolved the chief responsibility, care, and anxiety during the entombment and after the rescue of the victims. He spent whole days and nights in the pit. The silver medal was awarded to two young assistants, and the bronze medals to several others who rendered essential service.

— The new Hôtel Dieu is reported to have cost forty millions of francs. It contains only four hundred beds. The hospital was formally opened on August 11th by Marshal MacMahon. Accompanied by the medical staff and others, the marshal visited the various wards of the hospital, and to several of the patients offered words of comfort and encouragement. In the medical wards of Dr. Gueneau de Mussy, says the correspondent of *The British Medical Journal*, the marshal reminded the doctor that many years ago he was treated by him for intermittent fever, which obstinately clung to him, but which he was anxious to get rid of, as he was about to be married. Other physicians were consulted, but with no better success than that which attended Gueneau de Mussy. All the doctors advised rest, which MacMahon was going to follow, when he received an invitation to join a hunting party, which, notwithstanding the paroxysm of fever under which he was laboring, he accepted; and, in the run after a deer, his horse threw him into a ditch filled with water which was as cold as ice, and the next day he was cured, never having had a return of the fever since. One would imagine that this little incident alone was sufficient to render the marshal somewhat skeptical as to the utility of medicine; he nevertheless, in recognition of the services then rendered him by Dr. Gueneau de Mussy, has promoted the eminent physician to the dignity of officer of the Legion of Honor.

— A remarkable case of repeated rupture of the uterus in successive labors is reported in the *Chicago Medical Journal and Examiner* for August, 1877, by Dr. Rose, of West Winfield, N. Y. The patient, an Irish woman, aged thirty-two, the mother of two children, was taken with labor pains in June, 1869. Rupture of the uterus occurred five hours after labor began, and the child escaped into the abdominal cavity, from which it was delivered by turning. A similar accident happened to the same patient in April, 1872, May, 1874, and February, 1876. The last time Dr. Rose delivered a living child, and the patient suffered no more than is usual after an ordinary delivery.

— *The Lancet* for September 1, 1877, gives an account of the researches of M. Catillon regarding the physiological action of glycerine. It was found that given in moderate doses it acted as a laxative, diminished the elimination of urea, and improved the appetite. The maximum quantity of glycerine required to exert its beneficial action is from one half ounce to one ounce daily, this quantity producing the full laxative action and diminishing the elimination of urea, while improving the appetite and promoting nutrition. The experiments do not appear to lend much support to the use of glycerine in diabetes, but they indicate certain properties which may be of use in the relief of some symptoms of that disease.

— We see in a recent exchange that Proska succeeded in quickly replacing two strangulated herniæ by injecting several litres of water into the rectum by means of a syringe. In the first case all the other means of reduction had failed.

— J. Schreiber in the *Deutsches Archiv für klinische Medicin*, xix. page 616, recommends the following methods of proving the position of the stomach. A sound which is armed at its lower end with a small india-rubber balloon is introduced into the stomach. If the balloon is now filled with air through the mouth-piece of the sound distinct contractions of the stomach occur.

— E. Krull used the following treatment with success in eleven cases of icterus catarrhalis, some of which had been treated for a long time with the ordinary means without a good result. The rectum was injected once a day with water at a temperature first of 59° F., later increasing to 72.5° F., by means of a syringe. From one to two litres of water were used according to the sensations of the patient. In no case were more than seven such injections needed. Senator has also confirmed the method of treatment.

— We have received the Proceedings of numerous state medical societies. Many of our Eastern state societies have already attained quite a venerable age. That in New Jersey held its one hundred and eleventh annual meeting. This is the oldest in the United States. The Proceedings are made up largely from reports from the various districts. Connecticut held its eighty-sixth annual meeting in May, and Maryland its seventy-ninth. The Proceedings of the former present a number of original papers with illustrations and a series of district reports. In the latter we find that the annual oration was delivered by Dr. Weir Mitchell. This society receives reports on progress in the various departments of medicine. Missouri held her eleventh annual meeting. We find in this report papers on the Subcutaneous Division of the Femur, with a case, Surgical Dealings with the Sphincter Muscles, Cancer of the Larynx, etc. The Transactions of the Kentucky Medical Society, embracing so active an element in professional circles, are always of interest, and appear in an elegantly bound volume. We find an interesting paper on the Pathology and Treatment of Sprains, by Dr. Richard O. Cowling; also a Report on Dermatology, by Dr. L. P. Yandell, Jr.; Cholelithiasis, by Dr. John A. Octerlony; and an address by the president, Dr. Gaines.

— Dr. Wiley, of Philadelphia, writes to us a strong recommendation of the extract of malt and the glycerite of kephaline, in the treatment of tuberculous disease. He finds that either of these in combination with cod-liver oil are more readily tolerated than the oil alone, and more efficacious in combating the disease. He has used with satisfactory results the following combination: Cod-liver oil, four ounces; extract of malt (Lœflund's), eight ounces; glycerite of kephaline, two ounces; the dose of the mixture being a tablespoonful.

— We have received from Henry Thayer & Co., a neat volume containing a descriptive catalogue of the fluid and solid extracts, also pills, resinoids, and alkaloids, prepared by the firm. The matter is arranged in a simple manner, contains much useful information, and would be a convenient work of reference to the physician as well as to the apothecary.

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CASES OF DR. WARREN.

[REPORTED BY O. T. HOWE AND H. L. MORSE.]

Injury to Hand from Explosion; Lister Dressing. — S. M., twenty years of age, entered the hospital July 4th, two hours after receiving an injury to the left hand from the bursting of an overloaded gun.

After a slight examination it was decided to use Lister's dressing as offering the best chance for saving the hand.

The patient was etherized, and a more careful examination made under the spray of a five-per-cent. solution of carbolic acid. There was found to be a lacerated wound of the palm of the hand, almost all the integument being destroyed from just above the wrist to within half an inch of the heads of the metacarpal bones. The superficial muscles and tendons were destroyed. The thumb was torn from all its attachments on the palmar surface of the hand, and the joint laid completely open. There was also a compound fracture of the metacarpal bone of the little finger.

The wound extended round upon the back of the hand, being there about an inch wide, and leaving the integument covering the middle and ring fingers untouched.

The wrist-joint was not opened.

The wound was cleaned of foreign bodies as far as possible, there being a large amount of powder in it, all bleeding points were ligatured with carbolized catgut, and the edges of the cut approximated as far as possible with carbolized gut sutures. Twice during the first twenty-four hours the discharge from the wound soaked through the bandages, and the dressing was renewed under the spray.

For the next six weeks fresh dressings were applied as often as the discharge appeared on the outside of the bandages, always under the spray, and great care being taken to carbolize the wound thoroughly. At no time after the operation was there any swelling or tenderness about the wrist or arm. The wound granulated well, and cicatrization proceeded rapidly.

The patient's temperature rose on the evening of the 5th of July as high as 103° F., but steadily fell during the next ten days until it reached 100° F., and rose above that point twice only during the rest of the patient's sickness. After the wound in the palm of the hand had almost healed, there was some burrowing of pus in the fore and middle fingers and near the base of the thumb, which was relieved by incisions. The Lister dressing was removed on September 2d, the wounds having nearly healed. At the time of leaving the hospital the patient had already regained some use of the thumb.

Chondro-Sarcoma of the Ulna; Amputation; Lister Dressing. — Patrick McD., aged eighteen, a weaver by trade, entered the hospital August 1st. Eight months before entrance he noticed a swelling on his left arm; this slowly increased in size until shortly before he entered the hospital, when it began to enlarge much more rapidly. He had little or no pain in the arm until a short time before he came to the hospital, but for the last few weeks he has had sharp shooting pains in the arm. He knows of no cause, such as an injury or blow, for the swelling; there is no swelling of other bones. At the time of entrance the swelling extended from wrist to elbow; the arm is twice as large as the right; the tumor is very hard and seems to be immediately under the skin. There is no increase of pain on pressure, and no one spot seems particularly painful.

Ether being given, the arm was amputated just above the elbow by the circular flap (the operation being performed strictly according to Lister's method). Esmarch's bandage was used, and the amputation was performed without loss of blood, but on removing the tourniquet there was a capillary oozing difficult to control. While coming out of the ether patient tore off the dressing, which was immediately reapplied under spray. During the evening of the same day, the discharge from the wound having soaked through, it was again taken off under spray and the arm dressed with salicylic cotton. Patient had little pain and slept well. Arm was dressed again on August 6th; there was very little discharge; no bagging of pus. A short drainage tube was removed. The arm was dressed again on August 10th, 12th, and 14th. On the 14th all the stitches had come away, and there was a slight gaping of the wound near centre, and a small quantity of pus was squeezed from within the flaps; the salicylic cotton dressing was replaced by a regular Lister dressing. Dressed again on the 18th. On the 22d allowed to get up. Dressed again on the 24th. Wound healed through nearly its whole extent. Dressed again September 1st, when wound was found to be entirely healed. Simple bandage applied.

A microscopic examination of the tumor showed it to be a chondro-sarcoma. The growth involved the entire ulna, the extremities only of which were recognizable. There was little or no traumatic fever, the thermometer rising but on one occasion to 101° F. The whole amount of pus secreted did not exceed a tablespoonful. There was considerable serous exudation during the first few days, necessitating a frequent renewal of the dressing, which, owing to its complicated character, entailed a far greater amount of attention from the attendants than is required by the ordinary method of treatment. This was also a difficulty met with in the previous case.

Cancer of Tongue; Excision. — Robert R., groom, fifty-three years of age, entered the hospital August 14th. Four months ago patient noticed a small sore, like a canker, on the left side of tongue, which slowly increased in size until two months before entrance; since then it has grown rapidly and caused him pain. At time of entrance he had a sore, with raised and thickened edges, extending from the canine teeth on the left side along the inner surface of the jaw to the angle, and involving the whole of the left side of the tongue from its tip to its root. A swelling of the size of a pigeon's egg could be felt just below the angle of the jaw from the outside. There was a foul smell, and the patient insisted upon an operation.

August 17th. Operation performed under ether by Dr. Warren. The trachea was first opened between the thyroid and cricoid cartilages, and the tracheotomy tube inserted. A ligature was passed through the tongue to hold it to one side, and the pharynx was plugged with sponges. An incision was then made in the median line of the lower lip and continued from the point of the chin along the lower edge of the jaw beyond the angle. The vessels were ligatured, and the cheek dissected up and drawn upward toward the eye and held there. The lower jaw was then divided at the symphysis and again just above the angle. This portion was removed, exposing the diseased tissue, which was dissected out with knife and scissors, cutting first from below and then from behind forward. Two glands which seemed to be diseased were also dissected out. A large artery near the seat of the lingual was cut and tied during the operation. The hæmorrhage from the smaller vessels was controlled partly by ligatures and partly by perchloride of iron. The cheek was returned to its normal position and the wound closed with sutures. The string which was passed through the tongue was attached to the ear. The tracheotomy tube was left in the trachea. Patient slept five hours during the night, enemata of brandy and beef juice being administered every three hours. No food could be taken by the mouth, as the tongue was so much swollen that it filled the whole mouth.

August 18th and 19th. Patient took milk and beef tea by the mouth. He had a good deal of trouble with his breathing, the tube becoming filled up very frequently with muco-purulent discharge.

August 20th and 21st. Patient had severe attack of bronchitis, very abundant expectoration, becoming more and more purulent in character. Vomited almost all food taken by the mouth, and was fed by means of enemata.

August 22d. Tracheotomy tube removed, but this gave little or no relief. The expectoration became very offensive and profuse. His strength gradually failed, and he died on the morning of August 23d.

The external wound did well throughout his whole sickness, and healed by first intention. At the autopsy, performed fourteen hours after death, the trachea was found filled with greenish purulent discharge, very offensive. Gangrene of base of left lung, involving a portion about the size of a base ball; bronchitis throughout the whole of both lungs. Heart, stomach, intestines, and liver normal. No cancerous disease found internally. The wound of the tongue had nearly healed.

OBITUARY NOTICE OF DR. A. B. CROSBY.

Messrs. Editors, — Prof. Alpheus Benning Crosby was born at Gilmanton, N. H., February 22, 1832. He came to reside at Hanover, N. H., in 1838, when his father, Dr. Dixi Crosby, came to that place to assume the professorship of surgery in the medical department of Dartmouth College. He graduated in the academical department of that college in 1853, and received its degree of M. D. in 1856, from which time till 1861 he remained at Hanover in professional practice.

At the commencement of the war of the rebellion he was appointed surgeon of the first regiment of New Hampshire volunteers, and the same year was made a brigade surgeon and medical director on the staff of Gen. C. P. Stone. He subsequently held the same relations to Gen. John Sedgwick, Gen. Silas Casey, and Gen. John Peck.

In 1862 he was appointed associate professor of surgery, and in 1871 he became professor in full of that department in Dartmouth College, as successor to his father. This office he held up to the time of his death. Between 1865 and 1871 he had also been appointed professor of surgery in the medical department of the University of Vermont, in the University of Michigan, and in the Long Island Hospital College. He was elected professor of anatomy in the Bellevue Hospital Medical College in 1872, and surgeon to that hospital in 1876, both of which offices he held at the time of his decease.

In all these positions and in the practice of his profession, his success was preëminent, and his reputation as a teacher and surgeon was unsurpassed by that of any practitioner of his age in this country. Though founded on a profound knowledge of all the subjects he professed to teach, and a thorough experience and conscientious performance of duty in his profession, his success was also essentially enhanced by his fine personal appearance, his kind and genial spirit and affable manners, and his high sense of honor, which made friends of all who knew him.

But this sketch must be restricted especially to an account of Dr. Crosby's last illness and death.

He had come to Hanover from New York, where he had lived for the last five years, to perform his professional duties during the present course of the medical college, which commenced on the 1st of August. On the 3d he made the following statement to the writer:—

For several weeks before he had observed that he had risen in the morning not so fully refreshed by his sleep as usual, which he naturally ascribed to a winter and spring of incessant extra mental labor. He had also had a sense of "renal weariness." But only four days previously he had experienced great exhaustion after a fatiguing professional trip and loss of sleep, and then first had his attention directed to a copious diuresis. The latter persisting, he had on the day before caused an analysis to be made by two of his advanced pupils, who found the urine to have a specific gravity of 1030, and to contain not less than seven per cent. of sugar. He had also for two days past had a defect of vision, sometimes not distinctly seeing, and sometimes seeing double, the features of those in the farther and higher parts of the lecture-room, while he clearly saw those on his own level at any distance. His tongue was covered by a creamy coat, and thirst was constant. His pulse was but slightly accelerated, and the temperature was 99°, it having fallen from 101°, as found two days before. He had already adopted treatment appropriate to his condition.

He fully appreciated the gravity of his malady, and freely expressed his preparation for the probably not very distant result. I, however, suggested that, since the starting-point of the glycosuria was almost certainly the overaction of the brain to which he had so long subjected himself, complete cerebral rest for several months might remove the present symptoms, and he at once decided to refuse all practice and merely to give a daily lecture through the term, and then to go abroad for an indefinite period.

He called on me again on the 6th, when all his symptoms were somewhat improved, but he had decided after his lecture on that day to give up his course entirely for the present. On the evening of the 8th I was requested to see him at his house. I found he had kept his bed all that day, but there was no apparent dryness of the surface nor elevation of temperature; the tongue looked better and the thirst was diminished. His vision had very much improved within the past two days, and the diuresis had somewhat lessened. He was bright, cheerful, and even jocose as usual. But his face was slightly flushed, though not at all hot to the touch, and he was rather somnolent; but his sleep was so quiet and apparently so restful that I advised that it should not be unnecessarily disturbed. He passed a comfortable night till four A. M., when stertorous respiration commenced. I was sent for at nine A. M., and found him comatose. He died at a few minutes past one that afternoon (August 9, 1877).

The post-mortem examination, at which I was present, was very carefully made by Prof. C. P. Frost, on the afternoon of August 11th, fifty hours after death. The rigor mortis, which had occurred a few minutes after death, had disappeared. Only the brain, liver, and kidneys were examined.

The brain weighed fifty ounces avoirdupois. The anfractuosities were very deep, and the gray matter presented more than the average thickness. The entire organ was decidedly anæmic. Great care was taken to detect any organic change, but no softening was found, except to a very slight extent in the left hippocampus major. But there was decided scleroma of the whole substance of the pons and medulla oblongata, and consequently of the walls of the fourth ventricle. There was also a body as large as a common pin's head — apparently an embolus of long standing — at the point of division of the basilar artery into the posterior portions of the circle of Willis, which must have presented some obstruction to the cerebral circulation. No microscopic examination was made of any portion of the brain.

The kidneys presented evidences of extreme lesion, one of them being so pulpy as to be ruptured in its removal. The other kidney and a portion of the liver were sent to Dr. R. H. Fitz, of Boston, for microscopic examination.

Dr. Fitz found that the cells of the liver were "rather more granular than in a fresh, healthy specimen, — the granules largely disappearing on the addition of acetic acid. The kidney was extensively diseased, scarcely a normal tubule being present. This was suggested by the flabby, soft nature of the organ and by the opacity of the surface of a fresh section, particularly in the region of the convoluted tubes. With the microscope an excessive fatty and granular degeneration of the tubular epithelium, parenchymatous nephritis, was evident, and the Malpighian bodies were indistinct in their outline, and likewise exceedingly granular. On section through the bases of the pyramids I found numbers of hyaline casts."

I may here remark that Dr. Crosby's pulse was normally slow (but 60), and not strong, and that he had been aware of the anæmic condition of the brain for the last two years. He stated to me several months since that he never felt so able to make his highest intellectual efforts as when in a paroxysm of fever, and his heart, thus excited, delivered a greater amount of blood to his brain. He sometimes, when over-exhausted, resorted to a two-grain dose of sulphate of quinine to produce a similar effect upon the cerebral circulation.

I think the preceding facts afford an explanation of a death to most so unexpected and mysterious. The brain had been overtasked, for the last ten years especially, and had been but irregularly repaired by a sufficient amount of sleep. Dr. Crosby was an early riser, but was not early in bed;

and of course he lost sleep in his professional night-work. But it was doubtless his extra professional labor which turned the scale against him, especially his courses of popular lectures and his speeches on public and private occasions. An anæmic brain thus constantly forced and imperfectly repaired must ere long suffer some modification of nutrition. This did not declare itself till ten days before death by the glycosuria and the usual accompanying diuresis. The syrup — for it is essentially such — which deluged the kidneys, being a powerful irritant, excited a rapid inflammation of those organs, a consequent sudden arrest of secretion of the peculiar normal elements of the urine, and sudden death from uræmia. Similar irritant effects of the saccharine solution are produced externally in cases of vulvar pruritus attending diabetes in the female. The urethra had in the present case become highly irritated on the 6th of August, and I expected that signs of renal congestion or inflammation would promptly ensue. The diplopia and other defects of vision I should attribute to cerebral exhaustion and a loss of perfect accommodation rather than to uræmia.

Such a sudden termination of so brilliant a professional career is of pregnant interest to the younger members of the profession. As one who has now attained to his ninth septennium, though for many years beset by all the dangers which have conspired to end this valuable life, — and who has meantime lost three younger friends and professional brothers between the ages of forty-one and forty-five from over-work and insufficient sleep, — I trust I may be pardoned for reproducing here for the consideration of my younger readers the substance of a conversation I had with Dr. Crosby on his becoming a resident of New York: —

"You have come to reside in this metropolis at a dangerous time of life, and it is peculiarly so to one of your mental characteristics. The age of forty is a critical period in any hard-working and conscientious physician's life. Such a man has probably already secured a certain foundation for success, and a patronage which will support himself and family. But he does not yet feel assured of this, and still labors as unintermittingly as for the previous ten years to certify his success. But God has given sufficient vital force to last a man of average strength, if he taxes it continually in the practice of our profession, only till he is about forty years of age, or more accurately, to the sixth septennium, or forty-two years. Hence very few such men can go beyond this date without breaking down, and perhaps not to recover. Some are overtaken at an earlier age than forty, and some may go on to forty-four or forty-five, but the general proposition is as has been stated. Thus many of the most promising men in our profession die between the ages of forty and forty-five. With the cases of Conant and Brown, of this city, you were acquainted. The only sure means of escape are timely rest — and it should be periodical and complete — and sufficient sleep. You are now about forty, and have not systematically commenced with either. But this danger is evidently augmented if at this time of life a change of location is made, since the needed respite will certainly not be secured, but anxiety, and labor also, will be increased in securing success in a new position.

"But there is still another element which will tell still more against you. I allude to your social tendencies, your facility as a speaker, and the fact that you are therefore a favorite on convivial occasions. I have no apprehension that the allurements of city life, fatal to so many, will overcome a man who very seldom and always lightly drinks wine and never uses tobacco; but you will often be solicited to make after-dinner and public speeches and to give popular lectures, and to such calls you will be very likely to respond, at the expense of much extra mental labor and the risk of breaking down."

He replied that he considered me the proper person to caution him on these points, since I had myself gone over that ground, though I seemed to have got over all right, and he had no idea of being more foolish or careless in these respects than I had been.

"But you only know in a general way what I have done; you do not know, and I shall therefore tell you, how I have, as I believe, avoided the consequences which I fear for you. I found early in my career that I had not the strength to attain to my own ideas of professional acquirements and standing, and also to engage habitually in extra-professional labor and excitement; that I must entirely forego convivial and to some extent even social pleasures, or forfeit to a corresponding extent what I held to be the true aims and duty of a medical man. I have therefore never, like you, acquired the reputation of being a good fellow, and have usually escaped the solicitations from that direction which you will constantly have to meet. I also, many years ago, learned that the man who energetically uses his brain for sixteen hours daily needs eight hours to repair it thoroughly, which means that he needs eight hours of normal sleep. But as this cannot be secured by a physician in practice, I have adopted the best substitute I could command, and habitually take a nap of ten or fifteen minutes immediately before dinner whenever this is possible. This habit I have considered my main safeguard against exhaustion and illness for the last twenty-five years. I have also been absent from the city on a vacation at least one month in a year. Yet with these precautions, even, I felt assured that I had made two very narrow escapes, when forty-three to forty-four years of age, and again at fifty-eight."

He promised seriously to consider the points I had suggested. But he consented to assume one extra task after another, still sleeping too little and resting not at all. He had, however, decided to give no more popular lectures after completing his course last winter at the Cooper Institute, but to limit himself thereafter to professional work. But that decision was made too late.

He leaves a wife and three children. His mother still resides at Hanover, and his only brother, Dr. A. H. Crosby, at Concord, N. H.

The loss of such a man from our ranks is felt not only by the institutions with which he was connected and the communities in which he practiced, but also by the profession at large. I think he was personally acquainted with more individual members of the profession than any other physician of his age in this country, and I never heard him speak of a single one with any unkind feeling. Neither malevolence nor jealousy had any place in his mental organization. Ever and only pleasant will be his memory to all alike who knew him, for

'None knew him but to love him,
Nor named him but to praise."

E. R. PEASLEE.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING SEPTEMBER 15, 1877.

	Estimated Population, July 1, 1877.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1876.
New York	1,077,228	493	23.79	27.46
Philadelphia	850,856	274	16.74	22.88
Brooklyn	527,830	213	20.98	24.31
Chicago	420,000	169	20.92	20.41
Boston	363,940	182	26.00	23.39
Providence	103,000	40	20.19	18.34
Worcester	52,977	21	20.61	22.00
Lowell	53,678	22	21.31	22.21
Cambridge	51,572	32	32.26	20.54
Fall River	50,372	25	25.81	22.04
Lawrence	37,626	18	24.88	23.32
Lynn	34,524	11	16.57	21.37
Springfield	32,976	8	12.61	19.69
Salem	26,739	12	23.34	23.57

Boston Society for Medical Observation. — At a regular meeting of the society, to be held on Monday evening, October 1st, at eight o'clock, at its rooms, 36 Temple Place, Dr. Lincoln will read a paper upon Injury inflicted by Electrical Treatment.

A regular meeting of the Suffolk District Medical Society will be held at 36 Temple Place, on Saturday, September 29th, at seven and a half o'clock. The following papers will be read: Dr. C. E. Wing. Some Hints regarding Uterine Supporters. Dr. D. Hunt. The Development of the Middle Ear. Supper at nine o'clock.

The eighth annual session of the Medical Society of Virginia will be held in Library Hall, corner of Bollingbrook and Sycamore streets, in the city of Petersburg, Va., at seven and a half P. M., Tuesday, October 23, 1877. The public generally are invited to attend the session of this Tuesday evening. During the morning session of the second day, the address of the president, Dr. James L. Cabell, of the University of Virginia, will be delivered. During the second and subsequent days the following committees are expected to report: —

On Advances in Anatomy and Physiology. Honorary Fellow, Dr. Francis D. Cunningham, Richmond, chairman.

On Advances in Chemistry, Pharmacy, Materia Medica, and Therapeutics. Dr. John Herbert Claiborne, Petersburg, chairman.

(Dr. Claiborne has selected Dr. M. G. Ellzey, of Blacksburg, as a committeeman to report on Chemistry.)

On Advances in Obstetrics and Diseases of Women and Children. Dr. Robert J. Preston, Abingdon, chairman.

On Advances in Surgery. Dr. W. Otway Owen, Lynchburg, chairman.

On Advances in Practice of Medicine. Dr. John S. Apperson, Town House, chairman.

On Advances in Hygiene and Public Health. Dr. L. S. Joynes, Richmond, chairman.

Special Report on the Climatic Influences and Health Resorts in the Western Territories. Dr. B. G. McPhail, Salt Lake City, Utah, reporter.

Special Report on Poisoning by Eating Iced Custards, etc. Dr. J. S. Wellford, Richmond, reporter.

Special Report on Epidemic and Zymotic Diseases in Animals. Dr. John R. Page, University of Virginia, reporter.

Special Report on Yellow Fever. Dr. Robert B. Tunstall, Norfolk, reporter.

Subject for Discussion: Instrumental Labor. (Discussion open to any fellow or delegate who may wish to participate.)

The committee have also intimations of the preparation of some volunteer papers. Among them is one on the Diagnosis of Organized Heart-Clot, by Dr. M. L. James, of Richmond.